

Template for ISB Documentation of Stressors

A. General Information:

1. Name or Location of Example/Approach: TNC's Conservation Action Planning

2. Literature/Citations Used:

http://conserveonline.org/workspaces/cbdgateway/cap/practices/bp_4

Groves, C.R. 2003. *Drafting a Conservation Blueprint: A Practitioner's Guide to Planning for Biodiversity*. Washington, DC: Island Press.

3. Reviewer(s): John Wiens

B. Specific Questions:

1. What stressors are considered? A wide range of stressors to terrestrial and aquatic ecosystems and species

2. Are stressors categorized? If so, how? The approach describes stressors in terms of their effects on key ecological attributes of biological systems

3. Are the relations between stressors and management objectives modeled, and if so, how? Not modeled per se; rather, the stressors are identified as one of several steps in planning conservation actions to take in specified places, with respect to particular targets for management

4. If stressors are prioritized, describe the general approach. The approach begins with a specification of conservation or management targets and the ecological attributes that have been affected by human activities in ways that create stress – i.e., degradation of target status. The key ecological attributes are ranked in terms of their “health” or “viability,” and the identified stresses then evaluated qualitatively in terms of their scope (spatial scale) and severity. Next, the sources creating the stresses (“direct threats”) are identified and rates according to their irreversibility and their relative contribution to creating the stress. All of these ratings are then aggregated (in an online spreadsheet) to derive an overall rating of stresses and sources, which can be used to prioritize conservation actions where (presumably) they will do the most good.

5. How might this approach be relevant to Bay Delta? In principle, the approach could be used to identify and rate the importance of different stressors to specific management targets, or to examine how particular sources of stress have multiple, cascading effects on the ecosystem.

6. Follow up regarding additional questions/literature review/etc? It would be useful to contact staff of TNC-California to develop more background and/or to determine how or whether this approach has been applied to areas of interest in the Delta (e.g., the Cosumnes River preserve).

Some general comments prompted by reading this and other materials:

- Prioritization of stressors depends on prioritization of targets.
- Prioritization of stressors should include an assessment of the feasibility of eliminating or ameliorating the threats.
- Logically, one should first identify what is stressing a target system, and *then* consider the factor(s) that may be causing the stress; otherwise, one ends up with non-specific statements of threats without knowing the pathways by which they create stress. This handicaps management.
- It is important to define explicitly the spatial and temporal scales over which a stressor, and its driving forces, acts, since this will determine (in part) appropriate scales for management.
- Proper identification of stressors and sources helps to guide and prioritize restoration as well as management actions.